

Leica

1954 Summer 25¢

PHOTOGRAPHY

Volume 7 Number 2





Leica

PHOTOGRAPHY

Volume 7 Number 2 Summer 1954

Editor

JOHN F. BROOKS

Managing Editor

KENNETH POLI

Contributing Editor

JULIUS HUISGEN

Production

FLORENCE ZUBOWICZ

Circulation

ANN ERRICO

Gravure by

Photogravure and Color Co., N. Y.

Engravings by

Vulcan Photo Engraving Co., N. Y.

Equipment Photos by

Max Klein & Bros., New York

Art Production by

Jesse R. Smith of W. H. Lackie, N. Y.

Printed by

Ampco Printing Co., Inc., New York



"100 BELOW"

Photo by Dmitri Rebikoff

Leica II, $\frac{1}{25}$ th at f/5.6 Flash at 35 fathoms deep in the Mediterranean Sea. From a Dye Transfer Print by Peterson Color Laboratory, New York City

"BONNIE"

Leica photo at left by Ivan Massar
Leica IIIb, Summicron lens, f/8 at 1/100 of a second, on Plus X

In this issue...

TSANTSA . . . SAVAGE TROPHY OF THE AMAZON	4
by Lewis Cotlow	
LEICA PERSONALITIES—ARTHUR C. CLARKE	9
OPERATION LEMMING	10
I ENRICH MY SCIENCE TEACHING WITH PHOTOGRAPHY	12
by Charles I. Hellman	
SALON SECTION	15
MERMAIDS FOR THE MILLIONS	19
SIX WAYS TO SEE A BICYCLE	20
by Allan Turoff	
THE GADGET BAG	22
CHIAROSCURO WITH YOUR CAMERA	23
by Nathaniel Nitkin	
TAKE THE "BUGS" OUT OF INSECT PHOTOGRAPHY	26
by Herbert C. Weihrich	
VALOY II	28
HOW LEICA SOLVED THE PROBLEM	30
by A. E. Woolley	
"NOW THAT YOU MENTION IT..."	31

LEICA PHOTOGRAPHY is published by E. Leitz, Inc., at 468 Fourth Avenue, New York 16, N. Y., as a quarterly magazine, price 25 cents. Copies are sent free of charge to all registered Leica camera owners residing within the United States of America and U. S. Territorial Possessions. A subscription fee of \$1.00 per year is charged to non-owners of Leica cameras in the U. S. A., and \$2.00 to owners or non-owners elsewhere. Single copies are on sale at photographic dealers' stores, or direct from the publisher.

The editor will be pleased to consider original articles and photographs on Leica camera photography. All manuscripts should be accompanied by stamped, self-addressed return labels.

Copyright 1954 by E. Leitz, Inc. Printed in U. S. A.



THE AUTHOR
AND HIS LEICA
DESCRIBE A VISIT
TO HEAD-HUNTER COUNTRY

... **SAVAGE TROPHY** **OF THE AMAZON**

by Lewis Cotlow
New York City, N. Y.

Insurance man by profession, explorer, photographer and writer by nature, Cotlow is now in Africa, once more recording primitive life in stills and movies.

OUR destination was Borja, a small jungle frontier Peruvian post inside Jivaro head-hunters' territory. Directly where we were going was an area marked "DISPUTED" on my map. The boundaries of Ecuador's Province of Oriente overlapped those of Peru's Province of Loreto. Feelings were so touchy that Peru forbade maps which showed any favorable attitude toward Ecuadorian claims.

Captain Vasquez had been made my inseparable companion. He was exceptionally intelligent and well informed on the Jivaros. He had not only visited them; he had even lived among them and learned some of their language.

I looked out the plane window. The only distinctive mark was the Marañon River coiling ahead, narrower and narrower, to vanish in the distance. The endless landscape made me realize what a journey like this made overland instead of by air would have entailed.

Every now and then we saw a tiny compound cut out of the heart of the jungle, and made out a thatched hut. The Jivaros live in small family groups. No one knows exactly how many of them there are. They have dozens of names for themselves—but the early Conquistadors christened them all *Jibaros*, Galician for savages (in Castilian, *Hiváros*).

Into Huambisa Country

"Lucky you came at this time of year," the commandant of the garrison assured me. "We'll let you have the army launch. But if it were the rainy season, you'd never be able to get through the Pongo de Mensuriche."

When rain falls on the mountains and the snows melt, the water surges through the Pongo with such speed

The first Huambisas we saw ahead on the path were carrying old muzzle-loading shotguns. Vasquez and the guide both announced loudly that we came as friends with gifts.

They glared at us suspiciously and were very much on the alert until they were certain we were friendly. Then they relaxed and came slowly toward us. Vasquez



FIRST CONTACT of Jivaros is always wary and suspicious. Fear is chief element in Jivaro life and every stranger is regarded at first as an enemy.

and pressure that passage for any boat is impossible. Even in low-water periods the current is like a millrace. This impregnable natural barrier has guarded the country of the Jivaros from invasion.

It was important for me to get through the Pongo. Above it, some distance up the Santiago River, live the Huambisas, reputedly the most warlike of the Jivaros—the tribe I was most anxious to visit. But Captain Vasquez thought there would be little danger if we went as friends. We should be perfectly safe if the commandant would delegate some Indian soldier who had lived in the region to act as interpreter and guide. After all, the Huambisas did not want our heads—only the heads of their enemies, the other Jivaro tribes.

I stood by the captain of the launch, watching the water swirl past the projecting buttresses of the canyon walls. Finally, we turned into the Santiago River. On both sides of us was a solid wall of forest—nothing but palms, mimosa, rubber, myrtle, and wild cocoa.

At last the guide motioned us to land at a spot which seemed to me no different from any other. "We are here," he announced. "The rest of the way we must walk."

Leaving the launch to await our return, we followed a barely discernible trail. The guide, however, never paused, but swung straight along. We heard no song-birds—only the squawking of parrots, toucans, and blue and yellow macaws.

told me that the greatest danger to the white man lay in the initial stages of any meeting with these Indians. They were very apt to shoot first and find out whom they hit later.

They led the way to a small clearing. Here stood the *hea*, the communal house, perhaps sixty feet long, without windows. Its walls were palm trunks bound with lianas. The roof was covered with a thatch of palm leaves patterned black-and-white.

More Huambisas emerged, men and women alike. Their prominent cheekbones, broad and flat noses, and slightly receding foreheads were decidedly reminiscent of the Mongolian. Each wore a skirt tied round his waist fastened with a belt of hair.

According to Vasquez, social organization among the Huambisas is no more advanced than among the other Amazon tribes. Headship goes to the man who proves himself the most capable leader on raiding parties. Elders are respected because they must be supermen to have guarded their lives so long against enemies, accidents, and disease. A tribal chief is chosen only for a great war. Afterward, he has no power.

According to Jivaro theory, everything has a male or female soul. The women do the cooking, because fire is female, and they make the pots because clay, after all, is part of Mother Earth. Manioc is female—the Jivaro word for it is *mama*—and hence the women have to tend this; cotton on the other hand is male, and in



(Above) BE IT EVER SO HUMBLE, home is the only place Jivaros feel safe. Narrow paths leading to hea, or communal house, are often blocked by camouflaged, spear-filled pits to trap and kill unwary enemies.

(Right) WEARING his quiver of curare-dipped poison darts, a Jivaro warrior prepares to bring down game with his blowgun. Gun is accurate to thirty yards.

charge of the men. The men naturally educate the sons, the women the daughters. And so it goes. Conveniently for the men, most of the heavy work seems to fall in the female category.

Taking Some Photographs

As soon as our friendly relations were firmly established, I suggested taking motion pictures. The Huambisas quickly caught on to the idea. Some of them tried to make themselves more attractive, smearing their faces with black genipa and fastening beetle shells in the braids together with parrot and toucan feathers.

Vasquez lined up seven of the men, whom I photographed fullface and profile. Their expressions were tremendously interesting. Here was a pure savagery that I had never before encountered among South American Indians. Not a muscle in their faces moved—only the gaze darted restlessly here and there like that of a wild animal.

The movie camera started off splendidly, then without warning began to vibrate as though palsied. "These pictures will never be any good," I thought. "I was mad to come up here with this obsolete contraption without a light meter or anything." And I turned to my Leica to finish successfully the job of picture taking.

Dinner Is Served

A clay pot was bubbling over the fire. Finally a woman removed it and several men prepared to eat. "What is it?", I asked the guide.

He asked a few questions. "Nice monkey. Good monkey." I peered inside. The meat seemed red and firm, much like beef. But after all, monkey stew is monkey stew. I said, "No, thank you."

A Jivaro husband appeared with a bird from which he extracted the entrails, and gave both bird and entrails to his wife. She wrapped them in a banana leaf

and put them on the coals to roast. In a few moments the Jivaro devoured everything, leaf and all. Another man had a handful of long thick white grubs, the larvae of a palm weevil. His wife placed them, still squirming, in a pan over the fire to fry. They hissed and sputtered like small sausages.

Some Hazards Of The Night

Thoroughly tired after our tramp through the jungle, we indicated we were ready to retire. I was preparing to lie down near the fire until Vasquez told me about one of his soldiers, who while sleeping outdoors, had been attacked by a blood-sucking vampire bat. Already



I could see huge shapes darting back and forth through the air. "Fruit bats, looking for ripe bananas. They won't bother you," said Vasquez. "You'll never notice a vampire. It floats through the air like a feather and attaches itself so gently to your big toe that you probably won't know you've furnished a meal until you wake up in the morning."

We withdrew into the hea. Benevides, Vasquez, and I shared one bed, fortunately a very wide one, but also very short. From the knee down our legs stuck out. Outside, frogs were croaking. Some kind of night locust was tuning up, and howler monkeys were trying to outdo each other. I was resigned to a sleepless night.

But the next thing I knew, gray dawn was creeping

through the door. The Jivaros were rising to go about their daily tasks.

Blowgun Hunting Is An Art

After breakfast, two Jivaro braves with blowguns were impatiently waiting for us to follow them to the hunt. The instant we were ready they plunged into the jungle.

We walked a considerable distance before the Jivaro in the lead held up his hand. He pulled from his quiver a bamboo dart, hardly a sixteenth of an inch thick and twelve inches long. With the jaws of a piranha which hung at his belt, he cut deeply into the dart just back

wounded in the leg. It took the curare poison twice as long to paralyze the motor nerves. To use curare against human beings is strictly taboo for Jivaros.

Through centuries of experience with blowguns, the Jivaros have developed a type ideally suited to their purposes. Although the blowgun was nine feet long, it weighed but five pounds. The darts were accurate up to thirty yards; at fifteen they could pierce a half-inch pine board. Without the poisoned tip, however, a blowgun is not a particularly dangerous weapon.

When we returned to the hea, the warriors showed me some curare, a black, resinlike substance. To make it gummy and give it potency and body, as many as thirty ingredients might be used—barks, roots, lianas, spider webs, and others. They are pounded, shredded and cooked at night over fires. The brew boils for two days while the warriors chant spells and the witch doctor feeds the flames. For three more days the boiling and the mumbo jumbo continue. Finally the poison is tested on a frog. If it dies at once, the poison is good. However, it is harmless unless introduced directly into the blood stream.

Up to now, I had carefully refrained from mentioning head-hunting. I knew that certain Jivaro groups traded heads with other Indian tribes in exchange for coveted machetes and shotguns. Eventually these *tsantsas*, or cured heads, were sold to tourists. Both Ecuador and Peru frowned severely on the practice. Ecuador imposed fine and imprisonment for possession of a *tsantsa*.

But these Huambisas were apparently unaware that heads had been legislated against. They produced at once two *tsantsas*, each about the size of small grapefruit. The lips were fastened together with cotton fibers, lashed around chonta spines like the cleats of a ship. The hair, decorated with green beetles' wings, was still of its original length.

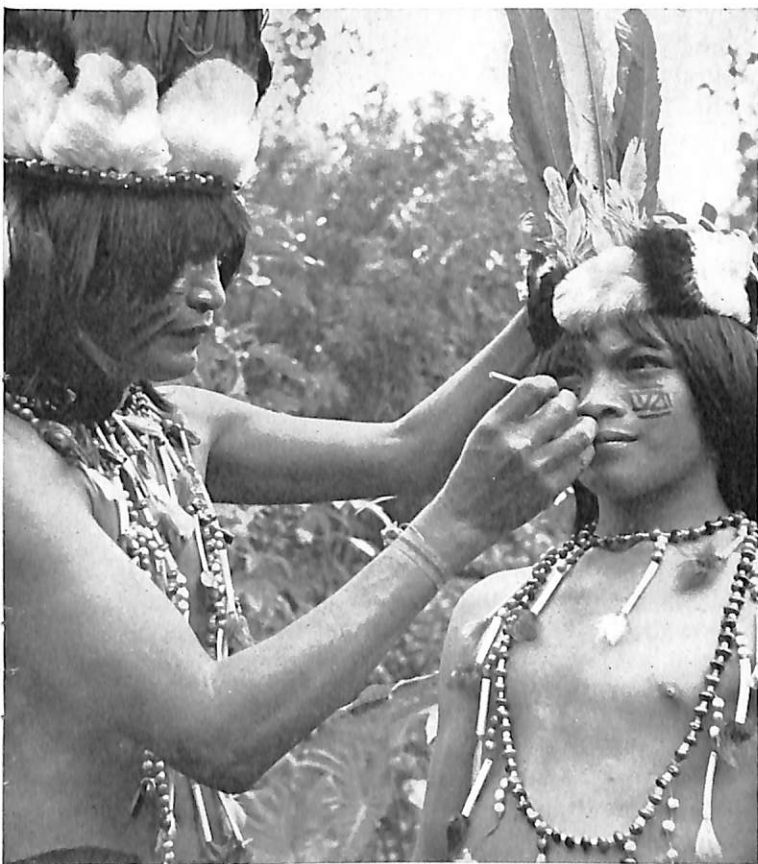
(Left) MAKE-UP before the dance is as important to Jivaros as it is to an American coed. Here a young Indian is decorated by his brother for the sacred *tsantsa* (shrunk head) dance.

(Below) TSANTSAS of an enemy dangles from Jivaro warrior's neck during ceremonial dance. Ceremonial dance lasts three days, assures warrior of safety from avenging spirits.

of the point, put it in the blowgun, and raised the weapon to his lips.

From a nearby tree limb came a sharp, almost human cry. We could make out a monkey, pulling at the dart, casting it away, and licking his wound. The Jivaro, however, had so nearly severed the shaft of the dart with the piranha jaw that the deadly curare-dipped point remained inside. The rest of the monkey troupe crowded around, and the other Jivaro sent a second shaft winging to its mark. The monkeys abandoned their wounded companions. Howling and chattering, they swung off through the trees.

The first monkey, struck in the chest, fell dead in approximately two minutes. The other had been





SHRINKING enemy heads begins with slow boiling. Young Jivaros practice this important ceremony with the head of the three-toed sloth, which has a remarkable resemblance to a human head.



FUTURE WARRIORS are instructed in the significance of the tsantsa by village witch doctor. Huambisas believe taking heads avenges death brought on by enemy curse.



JUNGLE TELEGRAPH. Giant signal or war drum is made from single tree trunk, sends messages for five or six miles. It is played with a short, fast beat, first strong, then diminishing.

Why Jivaros Hunt Heads

Most primitive religion is made up of gratitude and fear—gratitude for the gods' blessings, dread of the ill will or vengeance of those gods if offended or not propitiated properly. Among the Jivaros fear rules supreme; the enemy is always at the door. No Jivaro believes death can occur from natural causes, even old age. Death must be due to a curse laid on the victim by some enemy in another tribe. Illness may be healed by the witch doctor, but death must be avenged as a sacred duty.

How can the Huambisas know who the enemy are? They resort to the drug *natema*. The drinker of *natema* sees visions, magnificent and horrible. The witch doctor interprets the babblings that fall from his lips. Naturally his enemy appears to him in his drugged dreams.

The warriors chosen for the party blacken their bodies with *genipa* to make themselves invisible at night. They must look exactly like the demons they impersonate.

All enemy men caught in the hea are slain and decapitated. The women are taken captive. They will quickly fit into life in the new tribe. As soon as possible, the war party hurries away from possible avengers. No raid is carried out for conquest of land. In fact, the warriors never feel safe until they are back home. Not until a considerable distance is between them and any pursuit do they attend to the trophies. Then, a cut is made from base to crown of the skull, and the scalp and skin of the face peeled off. The skull itself is discarded as useless.

When the raiding party reaches home, the real work begins. Once reduced to the proper size, the head is blackened with charcoal and the hair carefully combed and decorated with beetles' wings.

Until the ceremonial feast is held, however, the *tsantsa* cannot be appeased. The Jivaro must not only kill the body of his enemy, but take possession also of the soul. For three days the warriors drink *natema* and dance. The witch doctor chants his incantations to the end and finally assures the warrior the *tsantsa* is appeased. All will now go well for him.

For a time the victor is very proud of his head. But, like a child who grows tired of his toys, he soon forgets all about it. The two *tsantsas* shown me must have been lying on some shelf, long unregarded, when I asked to see them.

From personal observations, I am confident that head-hunting still continues in the heart of Amazonia as it has for centuries. Here along the Santiago, the Huambisas still live as they lived centuries before—men and women scarcely emerging from the stone age of civilization.

Although Jivaros will not ordinarily attack white men with peaceful intentions, they remain the most warlike of all the savages of South America. They cannot be pushed about with impunity. Particularly when under the influence of *natema* or *masato*, their actions cannot be predicted. As recently as November 1941, seventy-seven placer miners were reported massacred by Jivaros in the Azuayo region of Ecuador.

LEICA *Personalities*



ARTHUR C. CLARKE

FROM HERE TO INFINITY

WHEN the atomic mushroom spread its violent cloud over Hiroshima, something of a bombshell burst in the world of letters as well. The field of science-fiction, rocket-belt deep in atomic bombs for a generation, suddenly found itself respectable. August book critics who had previously put this branch of writing in the same class with men's-room poetry, suddenly found that it had Vision.

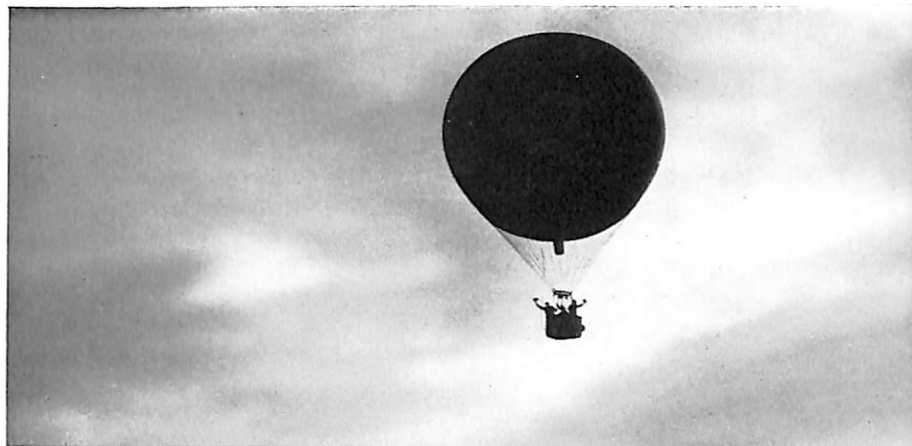
Now, it is true that the mainstays of much science-fiction had been the Bug-Eyed Monster and the Girl-In-The-Cellophane-Spacesuit.

But along with its new respectability, science-fiction found new authors, writers of real merit. And large among those who rescued the field from two-dimensional characters and four-dimensional dialogue and plots looms Arthur C. Clarke.

Astronomer, physicist, radar expert, and ex-ping-pong champion (King's College, London), Clarke is the author of some 50 science-fiction stories and an equal number of fact articles on astronomy, astronautics, et al. Some ten books bear his name.

A man of many interests and talents, Clarke's writing career began at fifteen with short pieces for his school magazine in Somerset, England. By this time, he was already an eager reader of science-fiction.

In London, some years later, he met up with the infant British Interplanetary Society, became its treasurer, and began to sell articles on space flight.



SPACEMAN CLARKE captured this semi-abstract shot of an ascending balloon with one of his Leicas.

MERMAN CLARKE casts a fishy eye on fellow photographer as he glides through sun-flecked Florida waters.



World War II and the R.A.F. made him a radar expert. Later, King's College made him a physicist and mathematician.

About this time, all Clarke's past training and interests began to come together, emerging as science-fiction stories, which appeared in U.S. magazines. Increasing his scope, he next did a technical book — INTERPLANETARY FLIGHT. Despite its specialized nature, the book was so successful that the author was asked to do a second book in a more popular vein. This was THE EXPLORATION OF SPACE.

PRELUDE TO SPACE, published last Spring, is a super-realistic account of the development of man's first moon rocket. EXPLORATION OF THE MOON is as factual as any book of this title can be at this point in our progress.

Having explored the moon, Mars, and space in general, Clarke is currently banging noses with barracuda, exploring the sea bottom here on little old Earth. Ever the scientist, Clarke does not belong to the primitive or breath-holding group of skin divers. He sports a compressed-air "lung" and a waterproof wrist watch.

Although he once confessed publicly to being unmarried because he was "unable to support a wife and a Leica," this proved to be one of Clarke's few unsubstantiated claims. He recently married a young lady from Florida and promptly took both her and his Leica underwater.



Photo: D. Rebikoff

WHY DID 1,000,000 AMERICANS HEAD FOR THE SEA-BOTTOM LAST YEAR?

UNTIL after World War II, few people had any personal experience with the most mysterious and beautiful two-thirds of the earth's surface—the sea bottom. Cradle of life itself, storehouse of untold mineral wealth, the ocean has always been a forbidding mystery to man.

Yet last year, in the U. S. alone, a million skin-divers rushed lemming-like to the sea and headed for the bottom.

Why? What lure brought the former book-and-hammock vacationer, the timid swimmer and a thousand thousand other unheroic citizens to this exotic and

sometimes dangerous playground?

Part of the answer lies in the various "lungs" which have appeared since the war. They let skin-divers breathe normally for upwards of an hour and downwards of 300 feet.

But the real answer is the adventurer's heart that beats beneath even the most conservative pin-stripe. For, who on a droning summer day, can resist the lure and legend of the sea? What unknown wonders await the fearless (weekends only) adventurer there? Strange marine creatures? Sunken treasure? Labyrinthine coral castles? Mermaids?

And, while there has as yet been no authenticated sighting of a mermaid, professional divers and adventurers have long known that reality surpasses imagination in the underwater world. Navy "frogmen," returning after World War II, helped to spread the word. Books like *THE SEA AROUND US* and *THE SILENT WORLD* fanned the flame of interest still higher.

Meanwhile, specialized underwater equipment started to become available generally. Ads for "flippers," masks, "snorkels" and fish spears became common. Cousteau's "lung" and Rebikoff's "torpedo" made breathing, navigating and photography nearly as easy below the surface as they are above.

At last, arm-chair adventurers the world over could get—literally—into the swim.

Many Things To Many People

The world beneath the sea has many faces. To the sportsman it is a fishing area like no other where he meets his prey on their own terms. For the archaeologist, it holds the treasures of ships' cargoes sunk before the time of Christ. The commercial diver finds a fortune in salvageable metal and cargo in modern shipwrecks. For the vacationer, it is like a trip to Mars.

So incredible are some of the wonders and beauties of the undersea world, that landlubbers dismissed the stories of skin-diver friends as overenthusiastic. Tales of sunken canyons, submerged cliffs, eerie chasms, and grottoes peopled by strange creatures in a thousand shapes seemed just too good to be reliable.

Werefish

According to some of the more enthusiastic divers, you do not feel like a fish while underwater — you *become* a fish. To begin with, weight is gone, a heady sensation in itself. Then, you swim with your flippered feet; hands are free to carry spear or camera. If your enthusiasm and budget are strong enough, you may wear one of the various "lungs" which allow you to breathe normally.

Once submerged you are in the environment which produced the first life forms on earth. As a matter of fact, your very blood bears a strong chemical resemblance to sea water. You are back in the element from which your remote ancestors escaped eons ago.

The Beautiful Sea

The sea is, of course, a vast storehouse of food and mineral wealth as yet largely unused. It is also a place of danger and indescribable beauty. Its upper layers

dance with sunlight that fades to yellow, green, and blue as depth increases and colors are subtracted from the spectrum. Its deep bottoms are in unrelieved, oppressive, absolute blackness. Its creatures range from the microscopic to the largest on earth—the whale.

So, in self-defense against the skepticism of land-lubbers as well as a sport within a sport, skin-divers began to look for ways to bring a camera under water with them. The answer, of course, lay in some sort of waterproof housing into which an ordinary dry-land camera could be placed for underwater use. Human ingenuity turned up everything in the way of casings from a large rubber glove to superefficient housings like the one shown on p. 19, designed by leading underwater experts.



COMMERCIAL SALVAGE OPERATIONS profit from the mobility of skin divers. Absence of air hoses permits them to explore every cranny of sunken ships.
Photo: D. Rebikoff

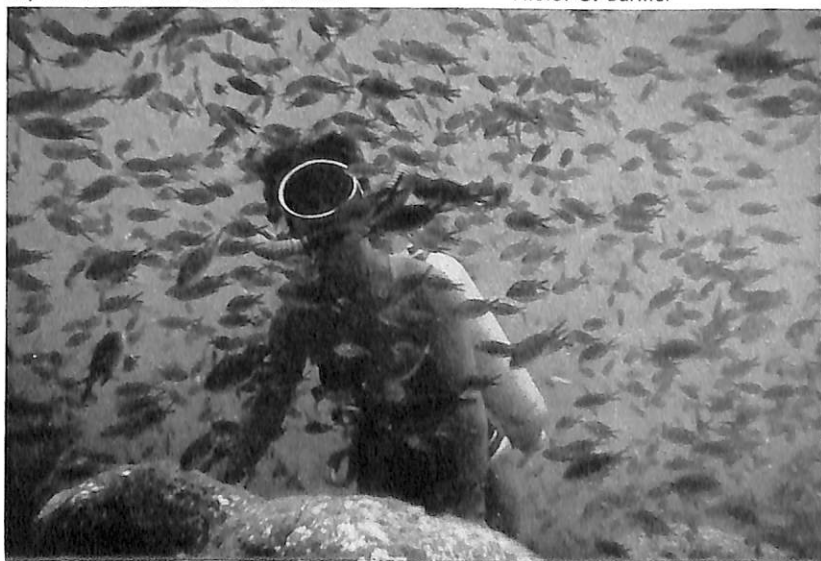
about 60 feet laterally, even in shallow water under the best conditions. This is because contrasts disappear quickly in the flat light. Color film helps somewhat, because it separates the shades of blue and green which predominate better than black-and-white film which records both as tones of gray. Filters help with both black-and-white and color film.

Because there are many variables in shooting underwater (clarity and type of water, time of day, sky conditions, nature of the bottom, depth, etc.) rule of thumb for exposure is difficult. Experience in a given area over a period of time seems to be the best guide to this newly popular field of photography. But despite the reduced light and contrast undersea, exposures can be surprisingly short. Some run as short as 1/250th at f/4 about noon in summer in clear sea water. The film, Plus-X for its good contrast.

Naturally, you can use an exposure meter, but you will need a waterproof housing for it, too. Actually, the less equipment you can get by with underwater, the more fun it will be.

So, when next you hear the call of the sea, don't answer it till you pick up your flippers, mask, and Leica!

SUBMARINE TOURIST excites the interest of curious fish much as tourists anywhere draw the stares of natives.
Photo: G. Barnier



ARCHAEOLOGISTS DELIGHT in historical treasures like this Greek amphora (wine jug) which the sea has harbored for thousands of years.
Photo: H. Broussard

Pictures Underwater

The photographer undersea finds himself with an unique set of problems. They are not difficult to solve, but they are different from almost all others he has ever encountered.

To begin with, the light underwater is very flat. Water diffuses it almost the way a mist does. What's more, visibility is limited. In the clearest ocean water, it is possible sometimes to see 150 feet. But this is rare. Ninety feet is usually the limit. In still, fresh water, visibility is 15-45 feet.

But in practical terms, photography is limited to

I ENRICH MY

Science Teaching WITH PHOTOGRAPHY

SCIENCE teaching is an inspiring but challenging profession. The wide area of subject matter, changing situations during experiments, the active participation of students in the laboratory make a panorama of changing scenes. The Leica, due to its ease of operation and versatility, is particularly suited to record these scenes and assist in improving teaching techniques.

A TEACHER'S LEICA SHOWS APPLIED SCIENCE IN EVERYDAY SITUATIONS

by Charles I. Hellman, High School of Science, Bronx, N. Y. C.

Bringing the Outside World Into the Classroom

Effective teaching requires ample illustrations and examples of new principles. We learn much more efficiently when theoretical ideas are applied to equipment or machinery used in our environment. For example, the principle of machines involves showing how

day, I often carry the Leica along as I walk around town, alert for situations where equipment illustrating science principles is being used. Power shovels, building machinery, electrical power systems are rich sources.

Figs. 1 to 3 show typical pictures for this purpose.

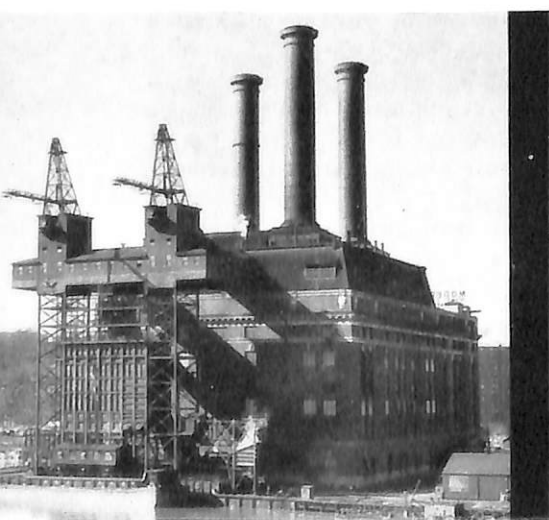


Fig. 1

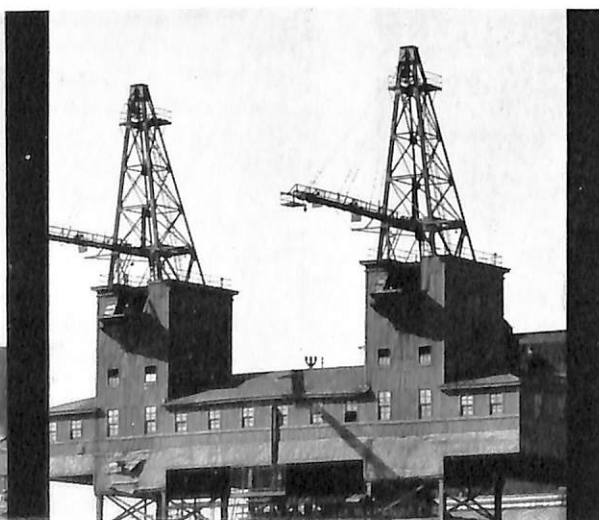


Fig. 2

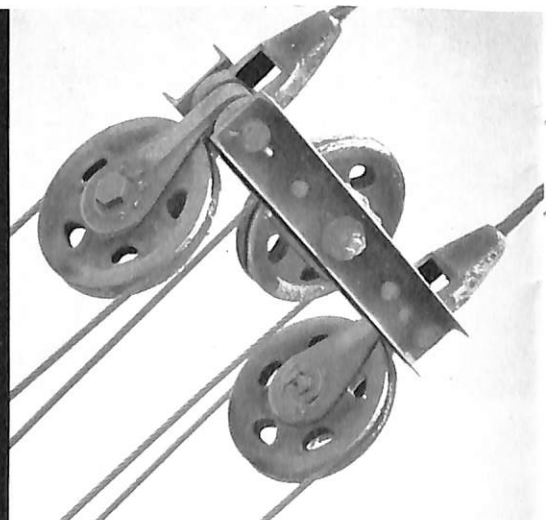


Fig. 3

pulley systems work. The student sees classroom experiments performed by the teacher. He then has an opportunity to assemble and operate pulleys in the laboratory. At this point, it would be appropriate to take the class on a trip to show how pulleys are actually used in building or other applications. Occasionally these trips can be planned, but often it is not possible to do this. The Leica, however, makes it possible to bring the outside into the classroom. On a sunny afternoon or Satur-

The long shots of the coal hoist give the pupil an overall picture of the scene. The close-up of a pulley system shows details of an application. The rapid interchangeability of lenses on the Leica, is, of course, a great asset. It makes possible easy change of angle of view without changing the distance of the camera from the subject. And, often equipment is mired in mud ankle-deep. It is a real convenience not to have to slog your way through the mud!

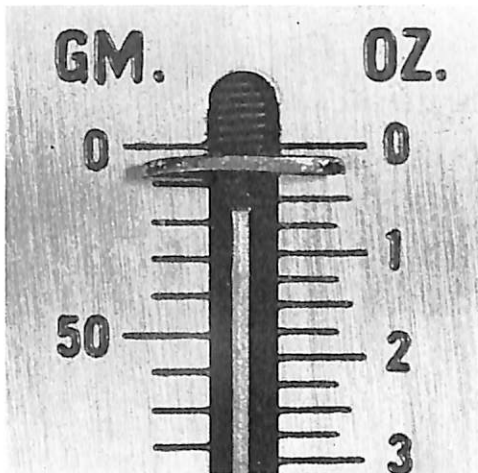


Fig. 4

Macrophotographs for Teaching

Extreme close-ups or macrophotographs are particularly useful in teaching. For example, in using spring balances, the student often does not realize that there may be a zero error present in a spring balance. This error must be observed and deducted from any subsequent reading to avoid an incorrect reading. I have found that a macrophotograph of the indicator bar, with no load on the balance, is effective in concentrat-

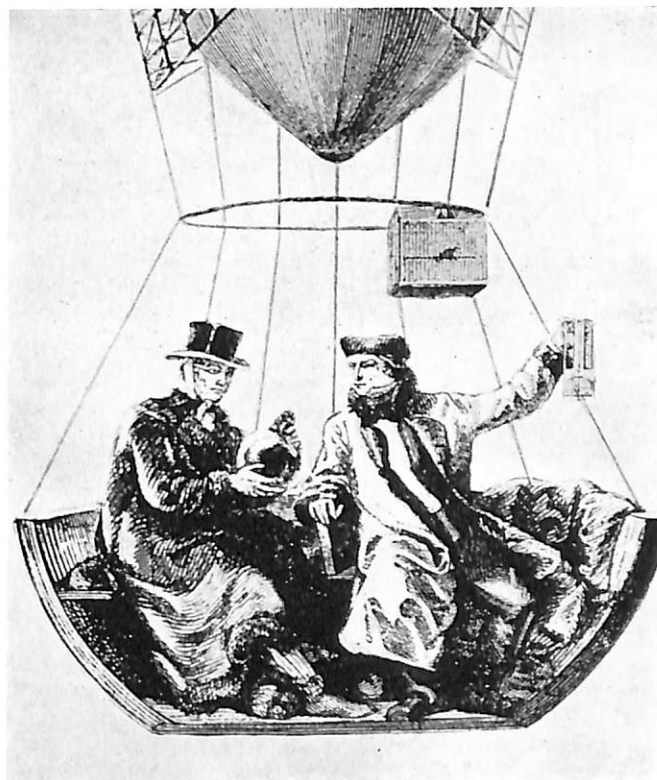


Fig. 6



Fig. 5

ing pupils' attention on the specific detail of the balance (Fig. 4). The Leica with the Focalslide is very suitable for macrophotography.

Many stamps have been issued commemorating the work of scientists. I have found that macrophotographs of these stamps, when exhibited in 8"x10" size on bulletin boards, stimulate interest of pupils in the life of the scientist portrayed. Fig. 5 shows a reproduction of one of the American series of stamps on scientists.

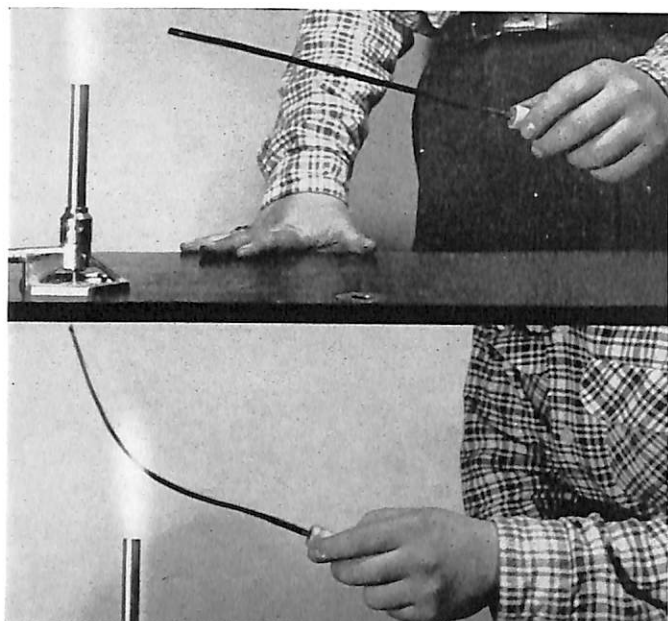
Photographs from Source Books

Another source for enriching science teaching is slides made from available books. You can find many illustrations of the application of science principles in magazines or specialized books. The history of science is a particularly worthwhile source for stimulating interest. Fig. 6 shows a fascinating woodcut taken from J. H. Appleton's *HANDBOOK OF CHEMISTRY*, published in 1888. It illustrates the first aerial ascent made for scientific purposes in 1804 by Gay-Lussac and Biot. These learned professors, the former of chemistry and the latter of physics, reached 13,000 feet in their open gondola. Professor Gay-Lussac is probably obtaining a sample of air in a flask while Biot is holding a thermometer. What intrepid voyagers to leave the placid academic halls for the uncharted reaches of the atmosphere!

The woodcut was copied from a reproduction in *MECHANICS, MOLECULAR PHYSICS, HEAT, AND SOUND* by Millikan, Roller, and Watson (Ginn and Co. 1937).

Sequence Photography

Many experiments are performed in steps in order to develop a concept. Photographs of these steps are very useful for drill or review purposes. Thus Figs. 7 and 8 show the effect of heating a compound bar. The bar is straight before heating but bends as shown, when placed in the Bunsen burner. This set of pictures helps to remind pupils that different metals expand at different rates when heated. There is hardly a topic taught in school that does not lend itself to this treatment. In chemistry, the steps in bending glass, in bi-



Figs. 7 & 8

ology, the stages in preparing a microscope slide, are examples of techniques that are suitable for sequence photography.

The Leica in Public Relations

Education is the cornerstone on which the training of the future citizens of our country is built. The public is naturally interested in knowing about activities that are carried on in our schools. An enlightened and in-



Fig. 9

terested public is more willing to expend funds to extend and enrich educational opportunities.

The role of photography in recording school activities and communicating them to parents can be very effective. Photos of students at work in different classes, of athletic events, and of other extra-curricular activi-

ties such as plays, make up reports that speak louder than volumes of words. These photographs may be used in the school or local papers. Figure 9 shows a group of pupils at work in the physics laboratory investigating the properties of electromagnets.

Although our discussion has been limited to the field of science teaching, the techniques are applicable to all subject areas. The use of slides for projection will enrich any subject. And, although you can buy commercially made slides, there is no substitute for photographs made near the school or pupils' homes. These have realism that no others can match.

Technique

A camera to record the wide range of activities in school photography must be extremely versatile, fast acting, and preferably inexpensive to operate in terms of film. The Leica with its interchangeable lenses and accessories is a fine choice for this task. My choice of basic equipment is the Leica IIIIf with the 50mm. f/3.5 Elmar, a Focaslide outfit with helical focusing mount and extension tubes, and Imarect finder. The Elmar is a good choice as its correction extends to the close-up distances needed for copying and macrophotography. Its optical corrections have been carried to such a degree that it seldom needs to be stopped down except for increased depth of field. The aperture is large enough for most work. In fact, since most of my exposures are made at f/5.6 to f/8, the lens is used at its best apertures. The Imarect finder is recommended as its accurate framing makes possible the fullest use of the Leica negative. The Focaslide outfit gives the Leica the versatility of a ground glass camera. The Elmar normally focuses down to $3\frac{1}{2}$ feet. The Focaslide with the Helical focusing mount lets you focus down to about six inches. With extension tubes, you can get direct magnification of the subject on the negative.

My accessory lenses are the Summaron f/3.5 35mm. wide angle lens and the Hektor f/4.5 135mm. long focus lens. The Summaron is particularly helpful when photographing groups at close quarters. Sometimes it is just impossible to move back enough without running into a wall or furniture.

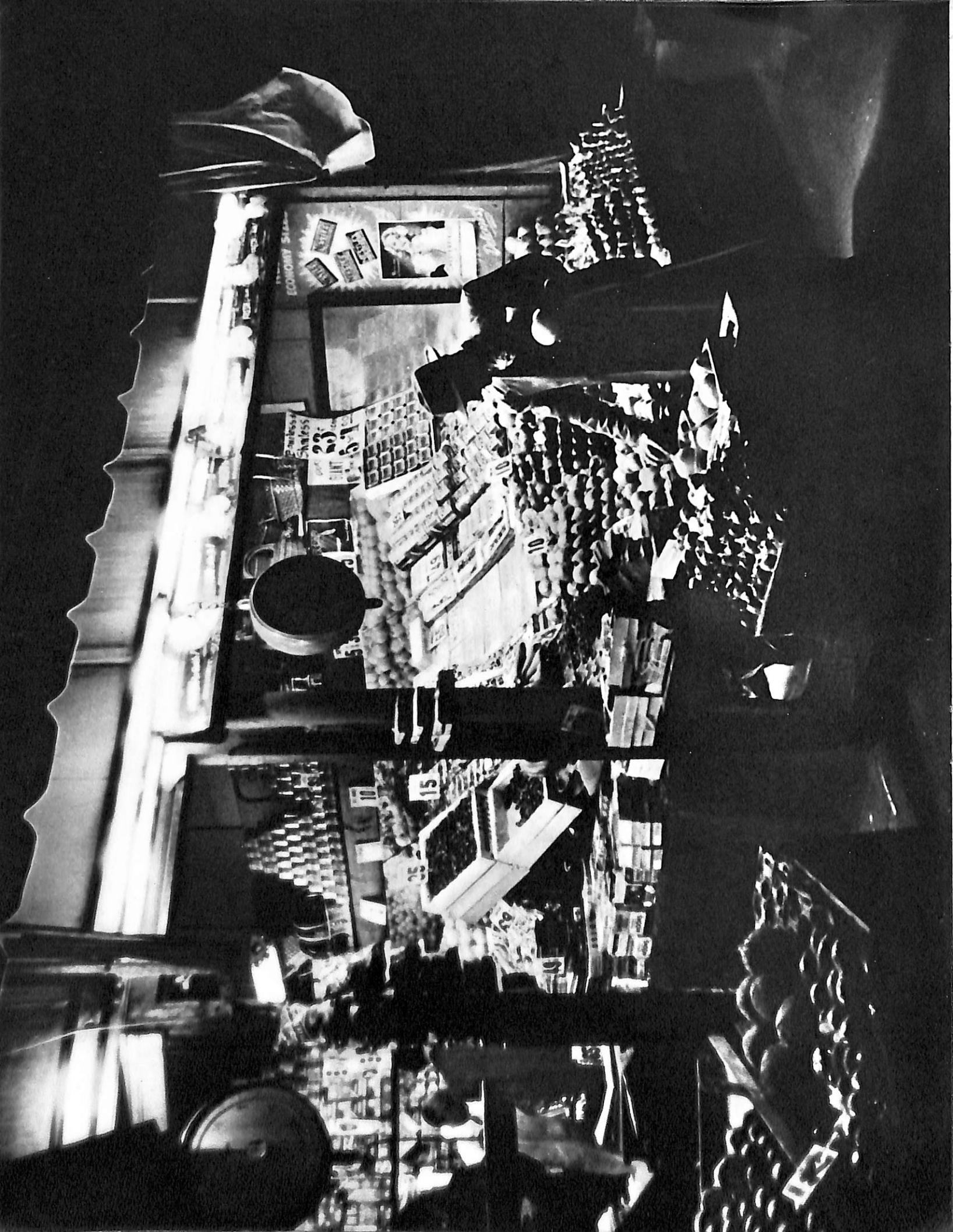
The 135mm. Hektor is a great help in obtaining close-ups as it produces a magnification of almost three times from a given viewpoint. It is also advantageous as improved perspective may be obtained by increasing the distance of the subject without loss of image size over the normal lens, working at closer distances.

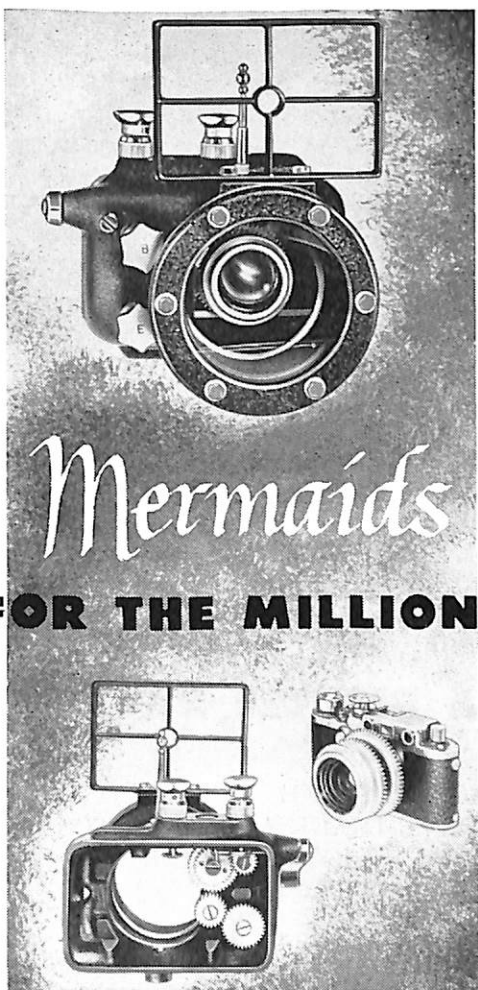
I recommend medium speed film for most work. However, where extreme definition is needed, the moderate speed films of high resolution now becoming available are a fine choice. Adox KB14 and Ilford Pan F films are a revelation in their extremely fine grain and high resolution. Practically any film developer formulated by a reputable manufacturer will produce good results. The importance of getting thoroughly acquainted with a particular film-developer combination cannot be overestimated. Experiment with new combinations when they seem to promise improved results, but stick to tried procedures when results have to be obtained.











New AKG Underwater Housing for Leicas If, IIIf, and IIIIf lets you take pictures down to 300 feet (deeper if you pressurize it).

LEICA UNDERWATER HOUSING MAKES THE WORLD YOUR OYSTER—AND VICE VERSA

NEXT time you see a mermaid you can prove it with your Leica!

For some time Leitz has been searching for an underwater housing for the Leica, equal to it in quality and performance. They found it in the AKG housing developed by the renowned underwater explorer, photographer, and writer ("Under The Red Sea", "Manta") Hans Haas and made by AKUSTISCHE UND KINO-GERATE, GmbH, Vienna.

Makes Your If, IIIf, or IIIIf A Submarine Camera

The AKG Leica housing accepts either the If, IIIf, or IIIIf with Summarit or Summicron 50mm. lenses. Made of practically indestructible castings, it is engineered for precise performance over a lifetime. Control knobs for focusing, aperture setting, film advance and shutter wind, and shutter speed setting do all necessary camera operations through waterproof connections to the camera inside the housing. A lever operates the shutter release, and an easy-to-use frame finder outlines the picture and provides parallax compensation. Various models of the housing are available for specific lens-and-camera (black or red scale) combinations.

Camera Is Quickly Readied For Underwater Use

A minimum of adaptation readies the camera for use with the new housing. You slip an adapting collar over the film advance knob of your Leica, and another over the shutter speed dial.

Next, you remove the Leica lens and slip gear rings onto the lens mount to operate the aperture and focus settings. Reattach your lens to the camera and it is ready to go into the housing.

A strong clamp holds the back of the housing in place. First, you loosen this clamp and take the back off. Then rub the inside of the protective glass window of the housing with a soap pencil which comes with the equipment. This prevents the glass from fogging from condensed moisture.

After you insert the camera, you replace the back, making sure that the rubber gasket fits snugly. Now you're all set to go under (as far down as 300 ft. without pressurizing your housing) for pictures of the never-never land under the sea.

Using Your Leica Underwater

On land, the housing with Leica enclosed weighs 8½ pounds. But, thanks to its buoyancy, it weighs almost nothing submerged. You will find it very easy to carry and manipulate underwater.

It hangs around your neck so that you will not lose it, should you need both hands for maneuvering. But, in taking pictures, you should hold it firmly, just as you would a camera on land.



"SCHOOL" OF SKIN DIVERS in an eerie underwater grotto were pictured by Dmitri Rebikoff. Divers wear flippers and compressed-air "lungs" for breathing. Underwater flash lights foreground.

There are so many variables in underwater photography, (clarity and saltiness of the water, time of day, clouds, depth below surface, reflections from bottom) that it is difficult to generalize about exposures. The best way to learn is shoot, shoot, shoot. The price of the AKG housing—passport to another world—is \$366.00.

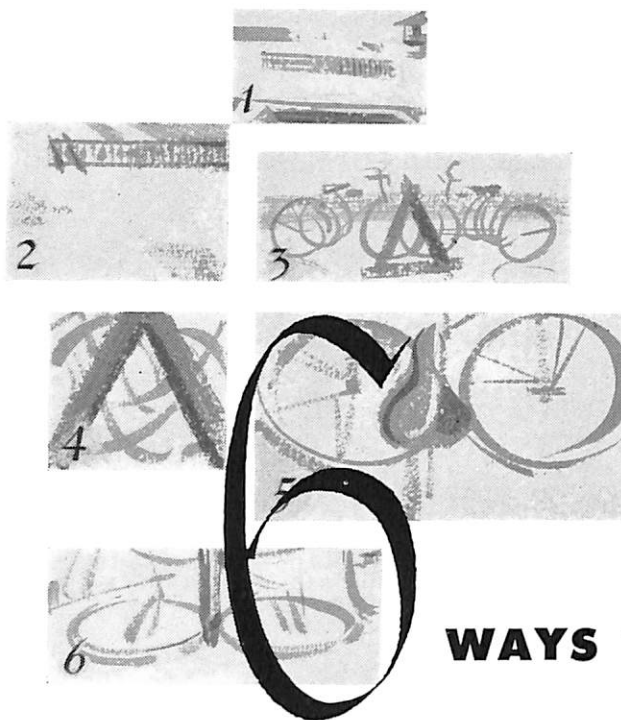


Fig. 1

by Allan Turoff
New York City, N. Y.

WAYS TO SEE A BICYCLE RACK

ONE PROSAIC SCENE
YIELDS FIVE IMAGINATIVE PHOTOS
TO A YOUNG PHOTOGRAPHER

PICTURES, like beauty, are in the eye of the beholder. And the sharp, sensitive eye sees pictures where another sees only drabness or banality.

As is often the case, a fresh approach to an ordinary scene is made by a young photographer. The pictures on this page are the work of Allan Turoff, 23, who found a variety of eye-catching photographs waiting for him in, of all places, a beachside bicycle rack. Turoff says he is interested in "photographing formal relationships found in reality" and does not arrange any elements of what he photographs.

Turoff has taken several top prizes in photo contests, and his work has appeared in *THIS WEEK* magazine and publications of the "Metropolitan Group" of magazines. He has also done color work for Raymond Loewy Associates.

The pictures shown here were taken with a Leica IIIa with a 50mm. Summar lens.

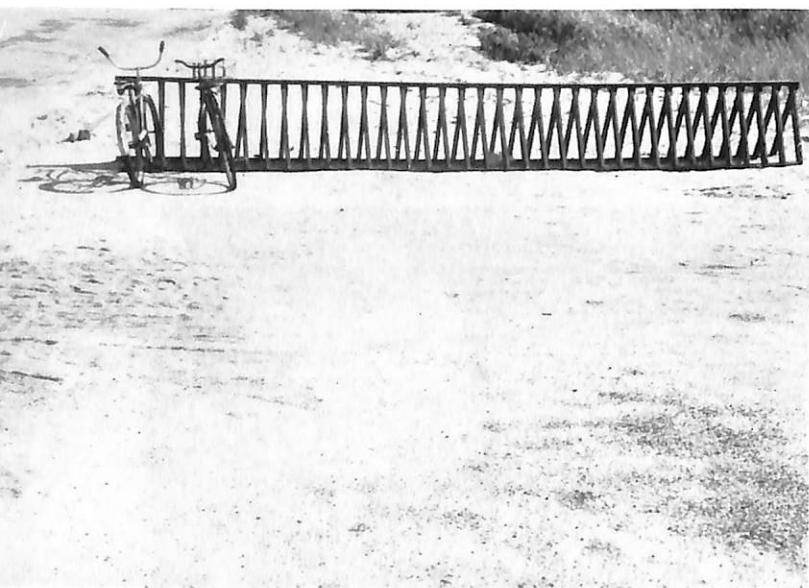


Fig. 2



Fig. 3

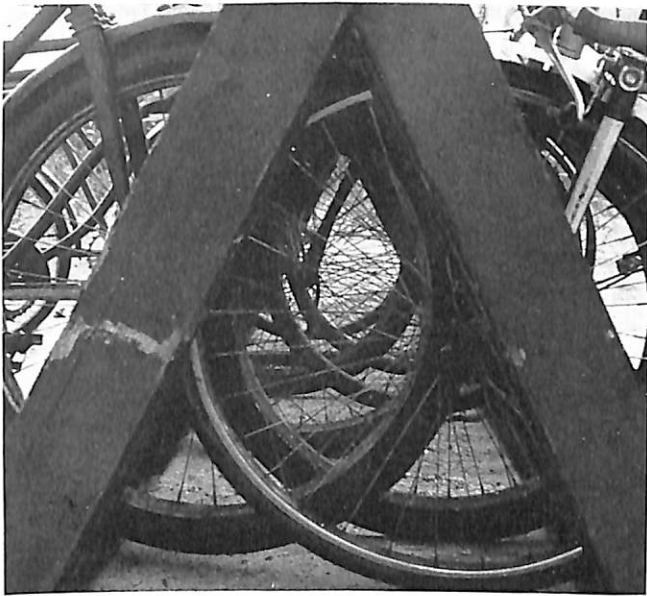


Fig. 4

(1) UNPROMISING SCENE is shown as it looked at first glance. Turoff shot from the back seat of the convertible in which he was riding.

(2) SELECTIVE EYE lifts a modern composition from the scene, tells the story of a young couple on a picnic at a lonely beach.

(3) TRIP BACK to the bicycle rack after more cyclists had arrived gave this picture. Bikes manage to look like deer locking antlers in combat.

(4) SEMI-ABSTRACT of lines and circles appeared when photographer moved in close to one end of the rack.

(5) WEIRD OWL EYES stared back when the photographer looked directly down at one bicycle.

(6) WHEEL-AND-SHADOW pattern, saved from monotony by the position of the wheel on the right, emerged when Turoff looked at the area in Fig. 5 from a different angle.

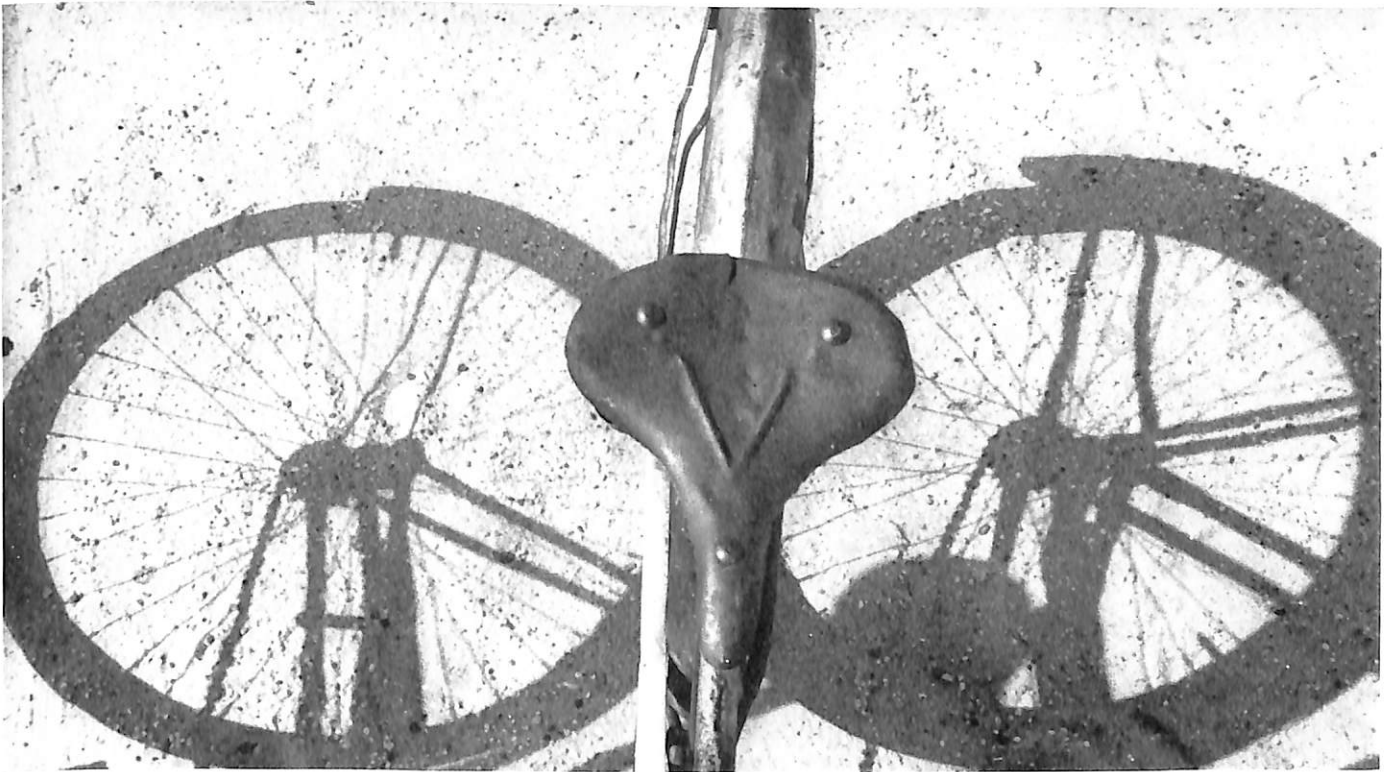
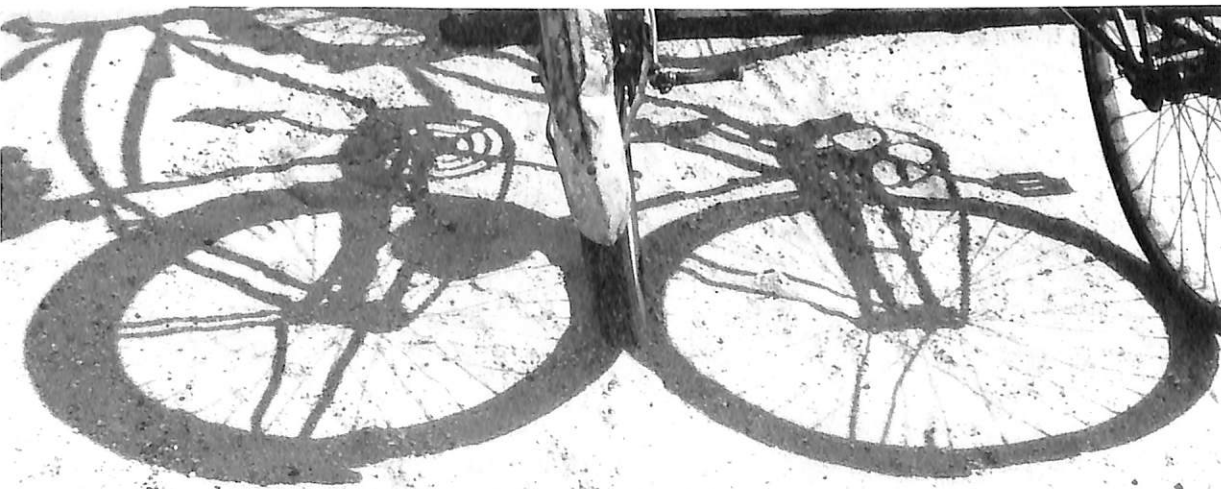


Fig. 5

Fig. 6



THE Gadget Bag



GRAVURE SECTION . . . A. E. Woolley of Baton Rouge, La. is the "author" of this month's photographs. Woolley, a professional (see p. 30), is writing a book on night photography, uses his Leicas for many assignments.

"Up The Ladder" was taken at $f/2$ at $1/20$ th with a 50mm. Summarit and Leica IIc. This picture catches the drama of the circus aerialist's ascent to his dangerous work. Lines of the net seem to suggest the feeling of nervous tension that always goes with trapeze acts.

"Lines To The West" catches the boredom of many young people in whistle-stop towns. Pictorially, the photograph reduces its story to basic elements—hot sky, evening-lonely buildings, and the rails. The rails pull at the eyes and the imagination with a promise of brighter prospects to the West. Leica IIIa, 50mm. Elmar at $f/3.5$ at $1/20$ th.

"Ferryboat At Baton Rouge" is a common sight in the photographer's home city. Here he has captured an everyday scene in its most attractive light. Leica IIb, 50mm. Summarit at $f/1.5$, 1 sec.

"8th Avenue Fruit Stand" is typical of night scenes available in cities. Woolley was walking along the street, noticed the picture, braced himself against a handy lamp post and shot. Leica IIc, Summaron 35mm. at $f/3.5$ and $1/8$ th sec.

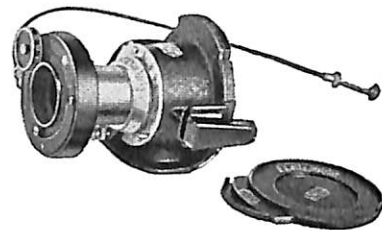
HOW TO make good (and not so good) prints better is the subject of "The Airbrush Technique of Photographic Retouching" by Walter S. King and Alfred L. Slade (Macmillan). Hundreds of step-by-step photos taken by Mr. Slade's Leica explain graphically the technique of the airbrush retoucher. Text covers everything from an introduction to the instrument to advanced work on color photos and portrait restoration.

The book should have high interest to artists, retouchers, and professional photographers who do their own airbrushing. And incidentally, it is a good example of the job the Leica can do on a large number of how-to-do-it photos. The book has a spiral plastic binding which lets it open flat. Thus you can follow the steps as you practice or work.

TWENTY YEARS AGO IN LEICA PHOTOGRAPHY

. . . *Two New Leica Models* were big news twenty years ago—the Leica FF (250 exposures) and the Leica OLIGO. Most of you know or have heard about the Leica FF. As a matter of fact, people often ask us whether they are still available (they aren't).

But the OLIGO is a real collector's item. It (see cut) was a single-exposure camera small enough to look like an accessory. Yet, it accepted the regular lenses, had a detachable before-the-lens, leaf shutter, viewfinder, and ground glass focusing. Shutter speeds ran from 1 second up. All in all, it was an oddly attractive if somewhat unusual-looking little camera.



About the OLIGO, LEICA PHOTOGRAPHY said that it "fills a definite need in miniature camera photography, and as such is destined to soon become a popular addition to the Leica battery of camera models."

But the profession of prophet has ever been risky. Time and photographers' tastes have taken the OLIGO off the market. Today, its job is done by most standard Leica models with an assist from the Single Film Holder.

NOTHING NEW UNDER THE SEA

. . . Although we're enthusiastic, and rightly so, about the new Leica Underwater Housing (p. 19), it doesn't follow that Leicas haven't been going underwater for a long time. In 1935, LEICA PHOTOGRAPHY carried an account by a Dr. Larsen of Hawaii about his picture-taking experiences among the islands' coral reefs. A friend had a home-made Leica housing (see cut) and the two divers had been shooting at five fathoms with good results. They even tried color film (Dufaycolor in those days), but complained of the overall blueness of underwater light.



VACATIONERS, PLEASE NOTE! . . . In our Spring issue, we invited you to visit the Leitz plant at Midland, Ontario, Canada when you were in the neighborhood. But, since then the situation, as situations often do, has changed. We have to disinvite you, if that's the word.

We just had a letter from the Midland plant which says, "Since this Spring issue went to press we have received certain Government classified contracts which prohibit the inspection of our plant and facilities by the general public. Much as we would like to show Leica owners our facilities, we must carry out the wishes of the Government Industrial Security office." Sorry! But, naturally, security comes first.



*CHIAROSCURO—The art of judiciously distributing the lights and shadows in a picture

Chiaroscuro ✱

WITH YOUR CAMERA

ART'S HERITAGE TO PHOTOGRAPHY GIVES IMPACT TO PICTURES

by Nathaniel Nitkin
New York, N. Y.



THE OLD CHESTNUT VENDOR was strongly lit by window lights, the street lamps across the way backlit him to separate him from the background. Everything else receded into an indistinct gray and then plunged into the blackness of night.
Technical details: Plus X film at Weston 500, developed in D-23, printed on Varigam. Leica IIIIf, Summitar Lens.

(Top) CHRIST AT EMMAUS — REMBRANDT
Metropolitan Museum of Art
This is one of Rembrandt's subtlest chiaroscuros. The main source of light, a candle, is directly behind Christ, silhouetting Him and "overexposing" part of the wall. The woman in the background, repeats the effect, balancing the picture composition.

EXISTING LIGHT, natural or artificial, has two faces. It can be phlegmatic and dull. Or, it can paint an exciting, dramatic picture. In other words, it is not light, but the quality of light that creates.

In nature, we see only reflected light. Usually, we photograph reflected light. Of course, we can capture direct light such as the sun shrouded by thin fleecy cirrus clouds, or naked electric light bulbs. But, they do not make the picture. Light bouncing from surrounding objects forms the pattern.

Where there is no visible light, we see nothing; neither does film except the ultraviolet, and in special forms, infrared rays. Blackness is an absence of visible light. The intermediate stages between light and blackness is shade. In color, shade by itself is bluish. But, it is modified, hence distorted, by the color of reflected light. In black-and-white photography, it is the familiar grey scale.

It takes training and self-discipline to recognize quality of light. But, anyone with imagination can easily acquire this talent.

For the photographer, existing and natural light are the richest sources of chiaroscuro.

Old Masters Developed Chiaroscuro

There really is nothing new in it. In ancient times, painters occasionally, more often by accident, created chiaroscuro effects. During the Renaissance, the Italian painter, Michelangelo Merisi da Caravaggio, in search of a way of dramatizing realism in his paintings, stumbled upon the principles of chiaroscuro. Unfortunately,



(Left) **MOODY SUNSET** by Laslo I. Vanyur uses chiaroscuro in a low key for a completely different effect. Here, mist, low sun and near-absence of background produce a mood of sadness and isolation. The quality of the light helps to make the difference. Leica IIIc, Elmar 50 mm., f/3.5 at 1/20th, #1 Yellow filter.

(Below) **SPRIGHTLY SUNSET** by Joe Clark tells a reminiscent story of childhood. Here, chiaroscuro highlights the essential story-telling details and subdues unnecessary material. Although the treatment is low-key, the pleasant mood is nevertheless well-expressed by the subject matter and action. Leica IIIf, Elmar 90 mm., f/6.3 at 1/100th.

the Renaissance of Caravaggio's time was a satellite revolving around the romanticism of Raphael. Caravaggio was unappreciated until Rembrandt van Rijn borrowed the Italian master's style of light and shade. Rembrandt nurtured chiaroscuro to perfection that has not since been equalled.

In his masterpiece, *The Deposition of Christ*, which hangs in the Vatican Gallery, Caravaggio directed a spotlight on the inert body of Christ. The fringes of spotlight illuminate the five foremost mourners, and the background is swallowed in a luminous though indistinct darkness.

Rembrandt made chiaroscuro flash with natural realism. There is hardly a major art museum without a Rembrandt. And, books reproducing Rembrandt's paintings and etchings, are available everywhere. A study of the Old Dutch Master of Chiaroscuro is your best instructor in quality of light.

Why refer to the past, to the Old Masters, when dealing with today's photography? The answer is simple; photographers and not modern artists are carrying on the traditions begun with prehistoric art. Who are the Daumiers, the Toulouse-Lautrecs, the Rowlandsons of today? Photographers who see and record, men like Henri Cartier-Bresson, Lou Bernstein, and Alfred Eisenstaedt.

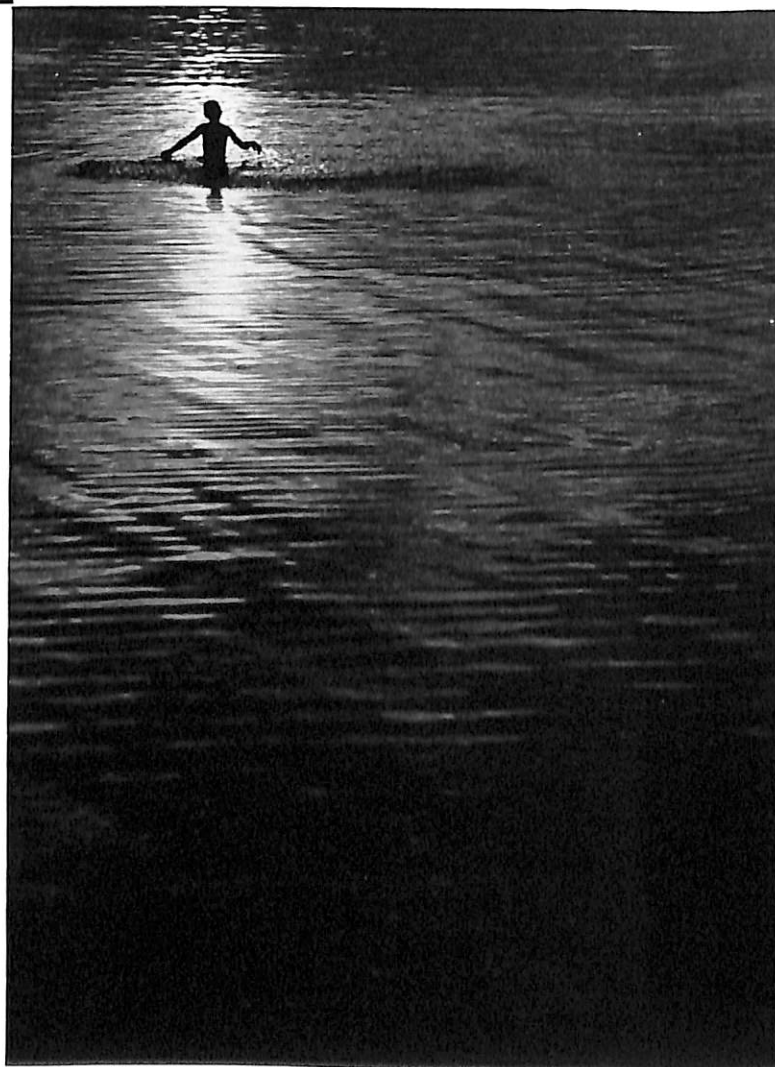
Chiaroscuro is one way to improve the impact of your pictures.

Natural Light Is Best

Can you create chiaroscuro by arrangement of floods and spots, multiflash, and all the other lighting paraphernalia? In theory, yes. But, when the picture is printed, we somehow feel that it is not natural.

True chiaroscuro is found in natural and in existing light. The photographer has to recognize it. It does not have to be the familiar spotlight effect. It is simply an arrangement of light and shade that directs attention to and concentrates on the main theme—paints it with bright light—while middle ground and background are blurred by shade.

In my opinion, the Leica is the best camera for chiaroscuro photography. It is so light and compact that it can be carried at all times without getting in the way. Chiaroscuro effects are mostly accidental. If you



do not have your camera on hand constantly, you will miss dozens of pictures.

Being light and compact, the Leica lets you change position quickly to capture the most dramatic presentation. The interchangeable lens feature is invaluable. Not only does it let you bridge or expand distance, but also control perspective. As a matter of fact, perspective is an illusion. In the two-dimensional plane of a photographic print, it becomes controlled distortion, giving some sort of versimilitude to the illusion of space where there is none.



(Left) AT LAKE GEORGE, N. Y. we climbed a mountain on the mainland in very cloudy weather. As we reached the top, shafts of sunlight were already streaming through the heavy, murky clouds, spotlighting a small part of the lake. I waited for the rapidly moving clouds to narrow the lighted area. Technical details: Plus X film at Weston 100, developed in D-23, Printed on Varigam. Leica G, Elmar Lens.

(Below) THE OLD MAN OF THE CLOISTERS.

The entrance of the Cloisters, N. Y. C., was brightly lit by daylight streaming through the door. The light bounced to and fro in the arch-like alley creating an exciting chiaroscuro pattern. Technical details: Plus X film at Weston 200, developed in D-23, printed on Varigam. Leica IIIIf, Summarit Lens.

What Is Chiaroscuro Light?

For instance, a spot of bright light paints the main subject, and the background fades at first gradually and then abruptly into the increasing indistinctness of shade. The eye focuses on the brilliant object, ignoring its background.

You take a walk in the woods. The forest is heavily shaded and light so feeble that you look to high film speed-developer technique as insurance against failure. As you walk, you see a shaft of light pierce the cathedral canopy of trees and spotlight browsing deer. As your eyes focus on the deer, the details of trees, grass, and flowers become indistinct in shade and the receding background is lost in a blackness. This is chiaroscuro.

Its variations are legion. The alert and imaginative photographer will in time find them more and more frequently as he trains his observation to recognize chiaroscuro.

The captions under my pictures explain just what I found in the subjects from standpoint of chiaroscuro. The photos vary from street scenes through outdoor and indoor pictures by daylight.

The Old Chestnut Vendor

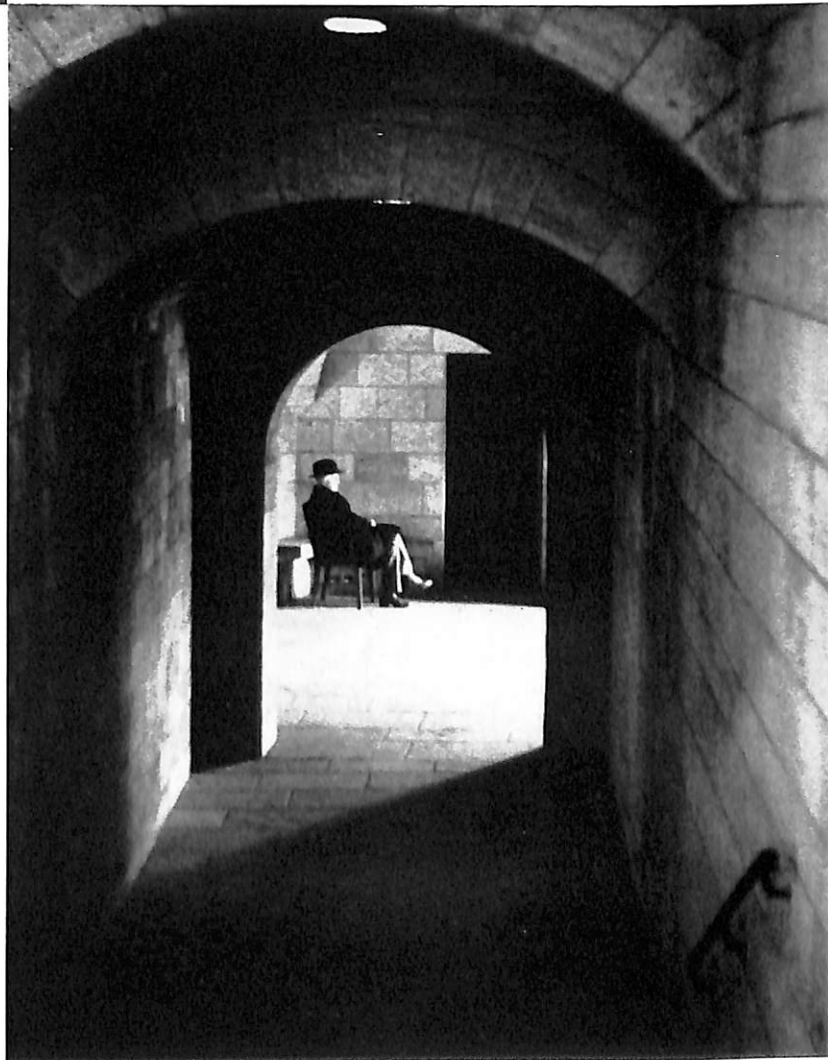
I was walking along Fifth Avenue, New York City, when I saw him. He was standing in a corner, barely lit by window lights, and the street lights across the way backlit him. The effect was to spotlight him and his chestnut stand. Furthermore, he was old, weary, and in the winter of his life. He was just existing. That was my picture.

I attached the supersensitive element to my Leica-Meter. With the high speed film-developer technique I use, I found that I could stop down to f/2.8 to increase depth without putting background into too sharp focus. The resulting print tells the story.

Developing And Printing For Chiaroscuro Effects

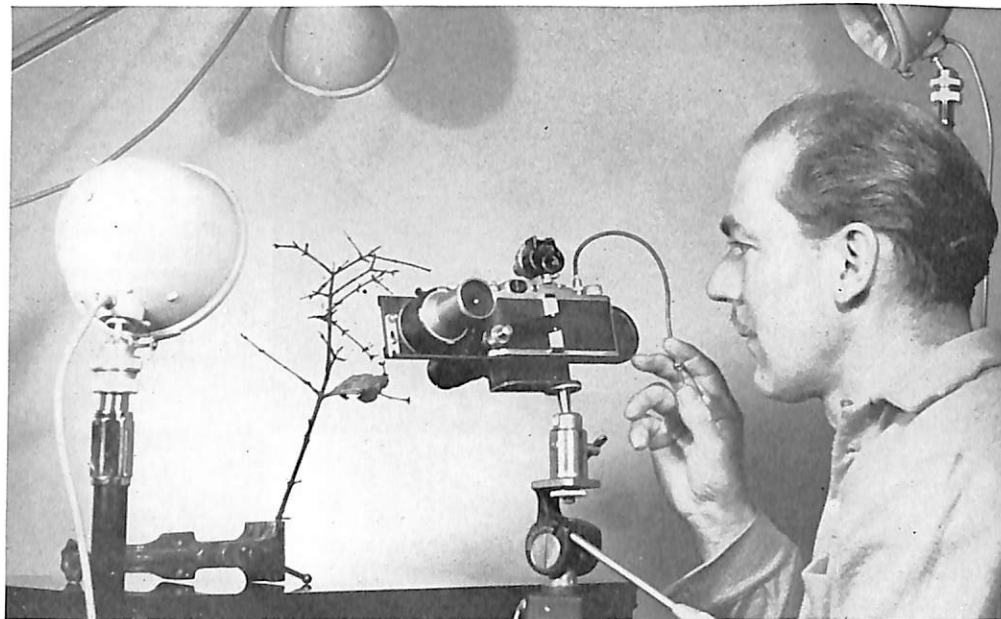
My own technique is quite simple. I use only Plus-X film and develop in D-23. This gives me three possible speed ratings of Weston 100, 200, 500—and with latensification, Weston 1000. In most prints reproduced here, I enlarged portions of negatives to 8x10. I can even go to 11x14 without bothersome grain.

One more word about technique. Chiaroscuro effects sometimes exceed the contrast range of film, and as a



rule, the contrast range of paper. So, dodging and burning-in become routine enlarging practices in this type of picture making. I use Varigam, and change Varigam filters while dodging and burning to balance the picture.

While chiaroscuro does not apply to every picture situation—and it certainly is a crime in types calling for high key, cheery light—it does make many an otherwise ordinary scene dramatic. Above all, it trains you to evaluate the quality of light—the backbone of all your pictures.



RELATIVELY SIMPLE SET-UP gets beautiful results for Author Weihrich as he shoots insects. (Imarect finder is unnecessary for this work.)

TAKE THE "BUGS" OUT OF

Insect Photography

STANDARDIZING THE SET-UP MAKES GOOD RESULTS EASY

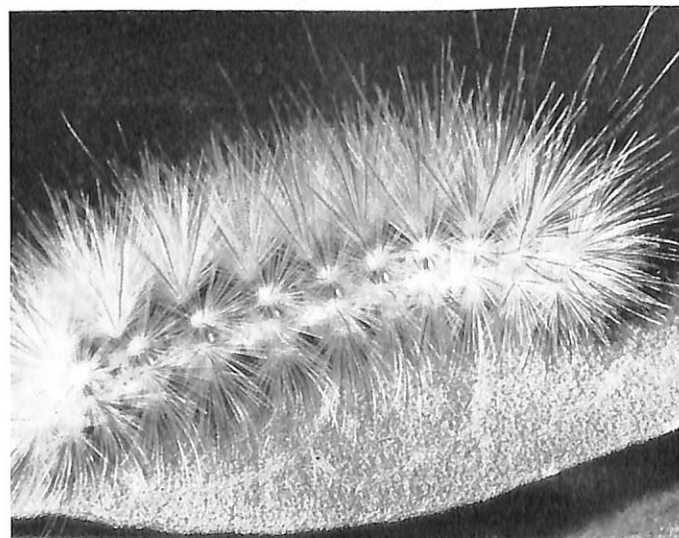
by Herbert C. Weihrich, Buffalo, N. Y.

UNTIL I started to take nature pictures, I never noticed or appreciated the beauty of common insects. Photographing them with my Leica brought it home to me. The Leica, its vast selection of accessories and modern electronic speed lights, make a perfect team for capturing every detail in minute insects. They reveal gorgeous, vivid colors and body structure. With the built-in synchronization of the Leica IIIIf and the zero delay of the speed lights, the timing between the shutter and lights is perfect; you get a fully exposed frame. I follow the Leitz recommendation of setting the shutter at 1/30 second and the Synchro Dial at 2, (1/50th, scale at 20 on Red-Scale models.—Ed.) using Kodachrome daylight film. I find the color balance between that film and my speed light to be very good.

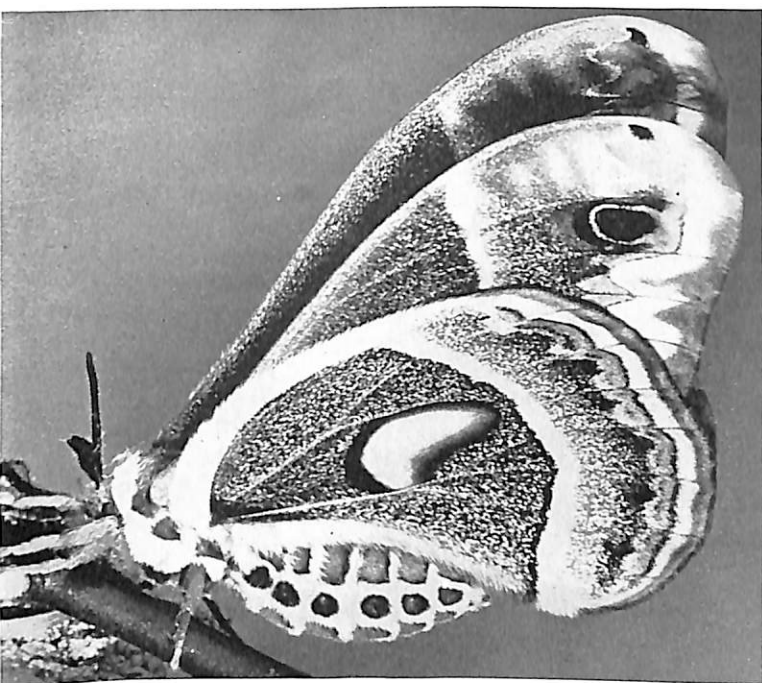
The Leica IIIIf used with the Focalslide, the Micro Extension Tube and the 90mm. Elmar f/4 lens, in or out of the mount, gives you a wide selection of distances at which to work in order to cover the varying sizes of your subjects. The 50mm. Summicron and the 135mm. Hektor lens will also add greatly to the coverage obtainable. However, if you do not own all these lenses and attachments, don't worry. You still can participate in this interesting field with your regular lens.

The use of speed lights in nature work has several advantages over the hot flood lamps. The benefits are

plenty of cool light which will prevent your subjects' dying from excessive heat, and which lets you close down the aperture for depth of field. It also gives you a flash duration anywhere between 1/5000 and 1/10,000 of a second which will prevent any motion in the sub-



BOTTLE BRUSH? Larva of the Acrea moth looks like a brush salesman's sample in this close-up. IIIIf, Elmar 90 mm., Focalslide and Adjustable Extension Tube. Original on Daylight Kodachrome, f/12.5 at 1/30th.

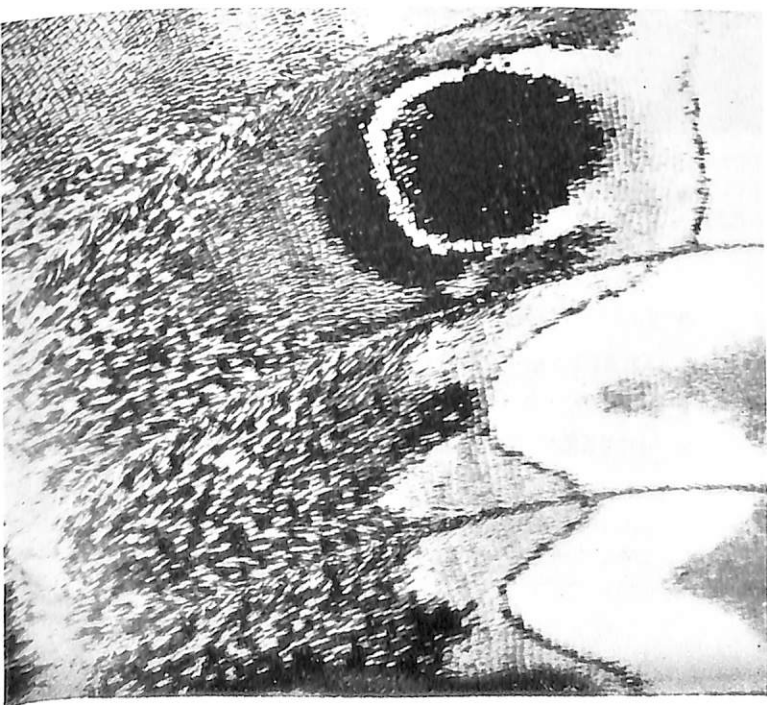


CLOSE, this Cecropia moth shows beautiful wing patterns, sports-model body design. Ilf, Hektor 135 mm. Focalslide and Adjustable Extension Tube. Original on Daylight Kodachrome, $f/16$ at $1/30$ th.

ject. Using the three speed lights (FT220 G.E. Sealed Beam Lights) at distances of 19 inches for the main light, 32 inches for the fill-in light and the third light on a blue cardboard background, I find that I obtain well-exposed transparencies by closing down to $f/12.5$. On darker subjects, open up to $f/11$; close down to $f/16$ for lighter subjects.

When you use the 5X Magnifier over the ground glass of the Focalslide, the critical focusing necessary for nature subjects is no problem at all. What's more, you will get on the transparency exactly what you see on the ground glass. By being able to close the aperture down to $f/12.5$, you will have plenty of depth and your subject will be in sharp focus from its nearest

CLOSEST shot shows wing pattern and individual scales of Cecropia moth. Same data as other shots, except Elmar 90 mm., at $f/12.5$.



point to its furthest point—a necessity in nature work. However, the other surroundings in the picture may fall off in sharpness due to the close distance at which you work. But this doesn't impair the picture, in my opinion. Rather, it enhances it, as the soft out-of-focus elements are less disturbing and center your interest on the insect.

Subjects such as spiders, caterpillars, cocoons, etc., can be gathered in the fields and brought indoors to be photographed (providing of course, that you have an understanding wife or landlord). Indoors, you can work at your convenience. You will not be hampered by wind, rain, or lack of light.

After taking the pictures, you can release your subjects again with no harm done to them. These subjects should be associated with their natural surroundings—twigs or flowers for moths and butterflies, leaves or branches for caterpillars and spiders. Using these props instead of placing the subject on a card or block of



CLOSER, we see details of leg and body hairs, construction of legs. Same data as above, except aperture of $f/11$.

wood will retain a true picture even though taken indoors. Here I might add that you will need plenty of patience when working with insects. They are unpredictable and may take off for other parts of your home just as you are ready to trip the shutter. When you catch up with them, gently pick the little creatures up on a twig and transfer them back to the original setting.

Sometimes you will have to move the camera into positions not obtainable with the ordinary pan head on tripods. That is where the Leitz Ball-Jointed Head has a distinct advantage over any other tripod head. With this head no position is impossible; you can be sure your camera will stay locked in whichever position you put it.

Try nature photography. You will find months of enlightening and profitable experiences in this field.

VALOY II

IN A WORD, VERSATILE

**NEW ENLARGER
CAN BE ADAPTED FOR
MACROPHOTOGRAPHY
AND COPYING**



Valoy II's sliding bracket with fine-focusing knob accepts Bellows Focusing Device or Focaslide (with inexpensive adapter) for macrophotography and copying.



- **RIGIDLY PRECISE . . .**
- **SIMPLE AND FAST
TO OPERATE . . .**
- **EASY TO CLEAN . . .**
- **ADAPTABLE TO CLOSE-UP
AND COPY WORK . . .**
- **MODERATE IN COST . . .**

These sound like the specifications for a dream enlarger. Actually, they describe the newest of the Leitz enlargers—the Valoy II.

Split-Millimeter Accuracy

Every Leica owner knows what Leitz precision means. One example of the close tolerances in the Valoy II is the fit of the 32" upright to the sliding arm which carries the enlarger head. The bar and the slot which accepts it on the sliding arm are individually fitted. So close is the fit, that enlarging head and upright carry identical number plates to insure that you do not get mismatched parts!

Operation Nearly As Fast As Auto-Focus

Although focusing is manual, clever engineering makes it extraordinarily fast, simple, and accurate. Fingertip pressure on a spring-loaded lever (see fig. 1) releases the enlarger head for instant sizing of the image. A fine focus knob is inches from the sliding arm release lever. While you focus with your right hand, you can make the final lens adjustment with your left hand (fig. 2). In a few breaths you can size and focus with nearly auto-focus speed.

You can make blowups from 2-12 diameters right on the baseboard. And by pivoting the upright to project onto the floor, you can make even bigger enlargements.

Cleans In Jig Time

Cleanliness—so important to top-notch results—is a matter of seconds with the Valoy II. The lamp housing (see fig. 3) swings back and catches in place to expose the dustless negative carrier and condenser mount. You can remove the condensers instantly for cleaning with a quick turn to loosen the bayonet flanges. The upper half of the lamp housing is held in place by friction only and lifts out readily for dusting or bulb-changing.

Use It For Copying, Too

The versatility of the Valoy II is outstanding. Loosening two screws lets you remove the enlarger head. This leaves the baseboard, upright and sliding arm as a rigid unit to which you can attach (with inexpensive adapters) a Focaslide or Bellows Focusing Attachment (as shown at left on opposite page). The fine-focus knob on the sliding arm makes quick, accurate copy work and macrophotography very simple. The ratio of reproduction with the Focaslide and focusing mount ranges from 1:12 to 1:2. With extension tubes, you can increase the range further. And for larger subjects, you can swing the upright around and place the subject lower than baseboard or table level.

The film guide on the Valoy II is the same as that on the Focomat Ic; you can use the perspective correcting device and the single film holder with it. Some other accessories are: Diaphragm Actuating Ring, Focotar 50mm. f/4.5 enlarging lens, orange filter, Newton Ring eliminator, 8"x10" easel, negative carriers for 18x24 mm., 24x24mm., 3x4 and 4x4cm., and adapters for mounting the Focaslide and Bellows Focusing Device.

The performance of the Valoy II belies the price—only \$96.00.

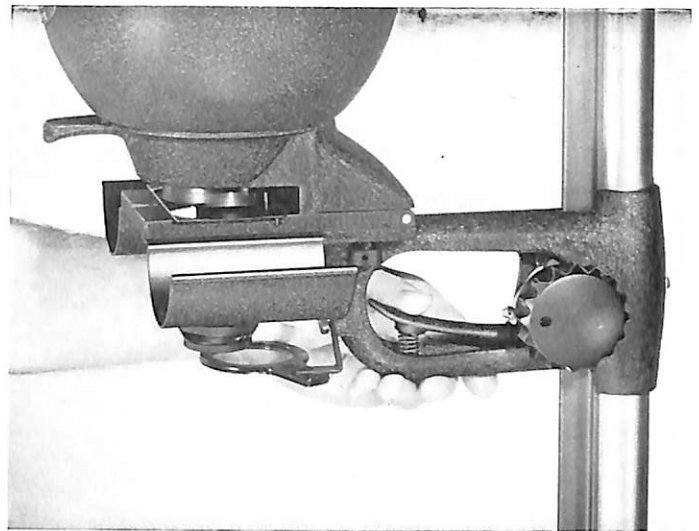


Figure 1 — Finger-tip pressure releases sliding arm for rapid sizing of image.



Figure 2 — Right hand fine-focuses as left makes final lens adjustment. Speed approaches that of an auto-focus enlarger.

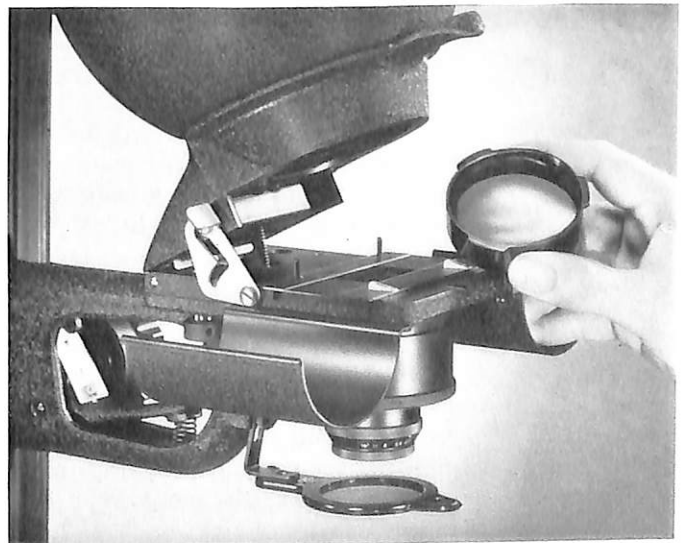
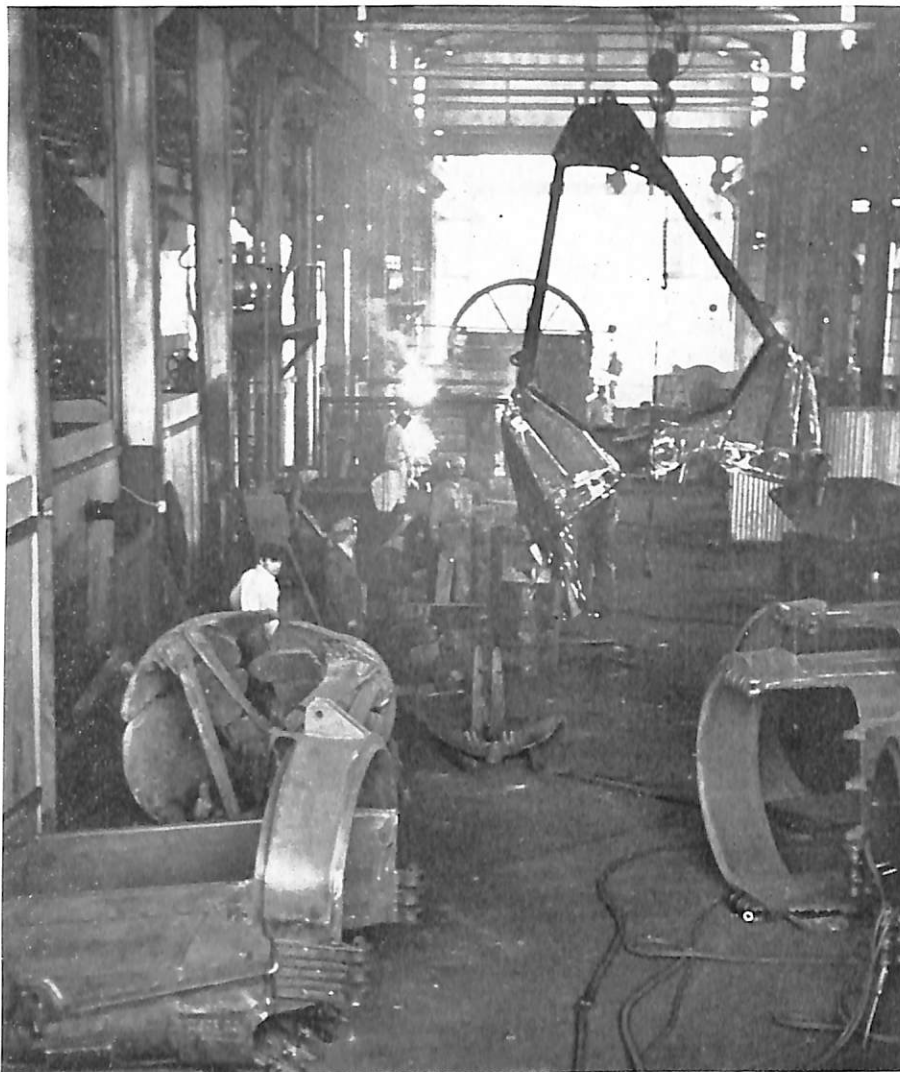


Figure 3 — Lamp housing tilts, bayonet-mount condensers are quickly taken out for fast, easy cleaning.



HOW *Leica* SOLVED THE PROBLEM

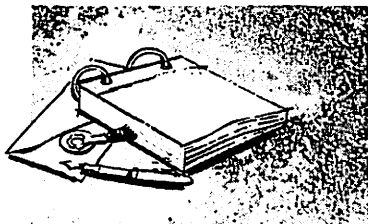
by A. E. Woolley, Baton Rouge, La.

THE Yaun Manufacturing Company building was over 500 feet long and the problem was to get as much detail as possible and sharpness from front to rear. The dragline buckets which the company manufactures are nearly black, so I needed as much light as possible. What's more, the owners had stipulated that the employees should not be idle while I worked.

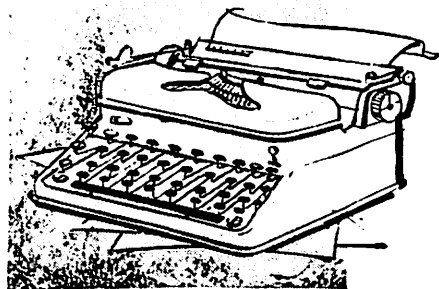
To set up either flash or flood was nearly impossible due to the length of the building and the danger of someone's stepping on or pulling out the light cord. Without the extra light, I couldn't use a camera bigger than the Leica because of aperture limitations. And I had to use existing light.

My Leica and existing light are a combination I enjoy working with. Whenever I use them, I have the greatest confidence in the results. As a matter of fact, I now use only my Leica for all black-and-white and much of my color. I use a $2\frac{1}{4}'' \times 2\frac{1}{4}''$ camera only when a particular situation demands it. The Yaun plant was shot my way, and I gave the finished $11'' \times 14''$ prints to the advertising agent and Mr. Yaun. Their reaction was complete satisfaction. A very natural feeling was retained in the picture because the employees did not have to hold still in poses while I shot. Depth of field and sharpness were excellent.

It seems that a previous photographer had tried the same photograph with a $5'' \times 7''$ camera only to have the prints rejected. At first, the Leica was a bit novel to the client, but now he regards the Leica much as he might regard a magician's magic wand. Technical data are: D-23 developer, 13 minutes at 75 degrees; Ansco Supreme film exposed at ASA 250. The exposure was $1/20$ th at $f/8$ with 50mm. Summitar.



"NOW THAT YOU MENTION IT..."



SHARP PRACTICE . . . If you use the Newton Ring Eliminator in your Focomat, keep in mind that it has *no* effect on the accuracy of the automatic focusing. The film plane stays exactly the same with or without this device.

However, when you must use the NEWOO, there is some small danger of the film's bulging slightly up or down. If it does, and the image on the baseboard goes slightly out of focus, correct the focus by hand with the Helical Focusing Mount of the enlarger. Don't fool with the focusing *cam* adjustment of the Focomat.

M 3 WITH YOUR PRESENT LENS . . . All screw-thread Leica lenses can be used with the new Leica M 3 with the addition of a bayonet ring. Separate adapters will soon be available for the various lenses to activate the automatic bright-line frame. Your dealer can give you additional information.

"BIRDNAPPERS," sports, and animal photographers will welcome the news that the 400mm. Telyt f/5 telephoto lens is again available for your Leica. The Telyt (used with the Visoflex housing) has the "reach" to get close-ups of architectural, landscape, and nature subjects that would be impossible for any other lens.

SET THAT REWIND LEVER PROPERLY . . . When you set your Leica rewind lever back to the "A" position after reloading, be sure you push it all the way to the stop. Unless you do, the shutter slit may not open on subsequent exposures. This will give you a puzzling series of blank exposures whose cause you may not be able to determine. So, be precise when you reset the lever.

WHAT'S BUZZIN', COUSIN? . . . Some of you owners of Ifs and IIIs have complained of a buzzing sound you hear when the shutter is at 1/25th or "Bulb." But there's nothing wrong with either your ears or the camera. These two models, as well as the IIIIf, have a speed mechanism with a governor which is what you hear. You'll also hear the buzz with the IIIIf, and it is quite normal.

IIIIf SELF-TIMER . . . The Leica IIIIf now has a built-in self-timer, just as the M 3 does. We are not in position at the present time to install them on existing models. Sorry!

The "NEW LEICA MANUAL" (12th Edition), published by Morgan & Lester, now includes a 16 page supplement containing up-to-the-minute information about the Leica M 3 and other equipment. Not only does the supplement cover the features of the M 3, but operating instructions as well. There are also details of the new 50mm. Summicron f/2 and the 125mm. Hektor f/2.5 lenses, the Stemar Stereo attachment, the Leica-meter Model 2, the new Underwater Housing and Adox films for the Leica.

MORE DATA ON THE LEICA M 3 . . . The M 3 was so new at press time in our last issue, that we have since learned some interesting angles that we weren't able to cover in our original article.

For one thing, you can make an *intentional* double exposure with the M 3 any time you want to. Here's how:

- (1) Lift up the rewind knob and turn it clockwise to remove any slack in the film.
- (2) Turn the rewind lever on the front of the camera to "R".
- (3) Hold the rewind lever in the "R" position with your finger while at the same time holding the rewind knob (in extended position) with the palm of your left hand.
- (4) With your right hand, wind the shutter with two strokes of the film advance lever.
- (5) Release the rewind knob and lever and make the second exposure by pressing the shutter release.

Another interesting point about the M 3 is that its newly-designed pressure plate is made of glass. This is a radical and happy solution to the problem of giving super-smoothness and hardness to the surface of the pressure plate.

One more thing. Our Managing Editor managed to let an error get into the Spring article on the M 3. It said that *all* M 3 lens mounts have parallel focusing and click stops. This is not true. The 50mm. Elmar for the M 3 has a rotating mount and click stops. The *rigid-mount* 90mm. Elmar has a rotating mount without click stops. For this error, the M.E. has been severely disciplined and has had his cable release and Leica-Meter M taken away.

E. LEITZ, INC.
468 Fourth Avenue
New York 16, N. Y.

Forwarding Postage Guaranteed

CHARLES E. SPONAGLE
1004 BELVEDERE BLVD.
SILVER SPRING, MD.

A 36256

Sec. 34.66, P.L. & R.
U. S. POSTAGE
Paid
New York, N. Y.
Permit No. 7841

POSTMASTER: Form 3547 Requested



**You've never seen anything like the
astonishing all-new Leica M-3**

Leica

world's most famous camera

We could tell you many wonderful things about the new Leica M-3. But nothing we could possibly say would give you the feel of what critical photo dealers, editors and professionals acclaim as the greatest camera of all time. You've got to try the marvelous new M-3 to believe it. And a demonstration is well worth a special visit now to your franchised Leica dealer.

E. LEITZ, Inc., 468 Fourth Avenue, New York 16, N.Y.
Distributors of the world-famous products of Ernst Leitz, Wetzlar, Germany
Cameras • Lenses • Microscopes • Binoculars